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013728405 **Image available**

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Studless tire used on a snow or ice covered road, having non-metal staple fibers dispersed in a diene rubber in such a way that the fibers are oriented in a thickness direction of a tread

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Number of Countries: 027 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1072446	A2	20010131	EP 2000306344	A	20000726	200122 B
CA 2315834	A1	20010127	CA 2315834	A	20000727	200122
JP 2001039104	A	20010213	JP 99212129	A	19990727	200125
JP 3390149	B2	20030324	JP 99212129	A	19990727	200323

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Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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Abstract (Basic): EP 1072446 A2

NOVELTY - A studless tire having non-metal staple fibers with an average fiber diameter of 1-100 μ m and an average length of 0.1-5 mm, which are dispersed in a diene rubber in such a way that the fibers are oriented in a thickness direction of a tread.

DETAILED DESCRIPTION - A studless tire having non-metal staple

fibers with an average fiber diameter of 1-100 μ m and an average length of 0.1-5 mm, which are dispersed in a diene rubber in such a way that the fibers are oriented in a thickness direction of a tread. A complex elastic modulus E1 in the thickness direction of the tread and an elastic modulus E2 in a circumferential direction of the tire (25 degreesC) satisfy equation 1.1 at most E1/E2 at most 4 (I) and the hardness of the tread rubber (-10 degreesC) is 45-75 degrees.

USE - The tire is used on a snow or ice covered road.

ADVANTAGE - The tire has excellent adhesion, adhesion friction, abrasion friction, digging friction and scratching friction performance.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-sectional view of the tire tread. (1) tread; (2) non-metal staple fibers.

pp; 10 DwgNo 1b/2

Technology Focus:

TECHNOLOGY FOCUS - POLYMERS - Preferred Tire: The non-metal staple fibers are non-metal inorganic staple fibers, preferably glass or carbon fibers.

Title Terms: SNOW; ICE; COVER; ROAD; NON; METAL; STAPLE; FIBRE; DISPERSE;

DIENE; RUBBER; WAY; FIBRE; ORIENT; THICK; DIRECTION; TREAD

Derwent Class: A95; Q11

International Patent Class (Main): B60C-001/00; B60C-011/14

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C08K-007/04; C08L-021/00

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002 018; R24073 D01 D02 D03 D12 D10 D51 D53 D59 D85 P0599 H0124 B5061; H0124-R; M9999 M2073; L9999 L2391; L9999 L2073

003 018; ND01; K9416; K9745-R; K9892; Q9999 Q9256-R Q9212; B9999 B3930-R B3838 B3747; B9999 B3792 B3747; K9665; K9905; B9999 B5301

B5298 B5276; B9999 B5367 B5276; B9999 B5287 B5276
004 018; G2891 D00 Si 4A; R05086 D00 D09 C- 4A; A999 A419; S9999 S1092
S1070; S9999 S1672; B9999 B5254 B5243 B4740; K9381
005 018; R01725 D00 D09 S- 6A; A999 A157-R
006 018; R05085 D00 D09 C- 4A; R01694 D00 F20 O- 6A Si 4A; A999 A419;
A999 A771
007 018; R01520 D00 F20 Zn 2B Tr O- 6A; A999 A146; A999 A771
008 018; A999 A497 A486
009 018; D01; D11 D10; D50; D93; F02; F86; F87; A999 A033